UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

MULCHING
(Acre)

Code 484

DEFINITION

Applying plant residues or other suitable materials, not produced on the site, to the soil surface.

PURPOSE

To conserve moisture; prevent surface compaction or crusting; reduce runoff and erosion; control weeds; and help establish plant cover.

CONDITIONS WHERE PRACTICE APPLIES

On soils subject to erosion on which low-residue producing crops such as grapes and small fruits are grown; on critical areas; and on soils that have a low infiltration rate.

CRITERIA

Mulching for Vegetation Establishment (critical areas, etc.)

Use 1½ to 2 tons per acre of small grain straw, hay, or pine needles. Mulch shall be evenly distributed. (Even distribution will result in 65 to 75 percent ground cover.)

Cotton burs, peanut hulls, seed screenings, and other materials may be used where weed seeds are acceptable in the mulch. These materials shall not be used on slopes steeper than 5:1. Mulch shall be evenly distributed at a rate which provides about 75 percent ground cover.

Commercial mulches including--but not limited to--jute mesh, excelsior mats, paper mesh or mats, wood cellulose mulch, synthetic fibers, and other similar materials may be used. Commercial materials shall be applied according to the manufacturer's recommendations.

Where there is danger of blowing or washing away, hay and straw mulches should be anchored. Some methods of anchoring:

- Use special mulch-anchoring tools.
- Use disk harrow with disks set straight.
- Emulsified asphalt sprayed uniformly on the mulch at the rate of 150 to 200 gallons per acre. Asphalt emulsions types SS-1, MS-3, RS-1, and RS-2 are commonly used to anchor mulch.
- Mulch netting that is made from either paper or synthetic materials should be used according to the manufacturer's recommendations. Burlap and poultry wire are suited for anchoring mulch. They should be stapled to the ground with wire staples spaced 2½ to 3 feet apart.
- The peg and twine method is suited for hay and straw mulches. Drive 8- to 10-inch wooden pegs into the soil, leaving about 2 to 3 inches exposed. Space the pegs on 3- to 4-foot centers. Then, loop twine around the pegs in a crisscross pattern to form a net.

Mulching Established Crops or Plants (small fruits, tree, etc.) or Disturbed Areas for Short Term Cover.

Evenly spread small grain straw, hay or pine needles to a depth of 3 or more inches so that the mulched area is completely covered (100 percent ground cover).

Cotton burs, peanut hulls, seed screenings, and other materials may be used where weed seeds are acceptable in the mulch. These materials shall not be used on slopes steeper than 5:1. Mulch shall be evenly distributed at a rate which provides

100 percent ground cover, at a minimum depth of 2 inches.

Commercial mulches including--but not limited to--excelsior mats, paper mesh or mats, wood cellulose mulch, synthetic fibers, and other similar materials may be used. Commercial materials shall be applied according to the manufacturer's recommendations.

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- Emulsified asphalt sprayed uniformly on the mulch at the rate of 150 to 200 gallons per acre. Asphalt emulsions types SS-1, MS-3, RS-1, and RS-2 are commonly used to anchor mulch.

- Mulch netting that is made from either paper or synthetic materials should be used according to the manufacturer's recommendations. Burlap and poultry wire are suited for anchoring mulch. They should be stapled to the ground with wire staples spaced 2½ to 3 feet apart.

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CONSIDERATIONS

Mulching may be used to provide cover and erosion control on disturbed areas requiring short term protection.

Mulching can be used to control weeds, surface temperatures, erosion, and to retain moisture around established plants or on areas during plant establishment.

Mulching may reduce delivery of sediment and sediment attached chemicals to surface water by reducing runoff and erosion.

Mulching may improve microbial action in the soil surface, may improve infiltration, and may reduce runoff, erosion and evaporation.

PLANS AND SPECIFICATIONS

This practice shall be recorded using narrative statements in the conservation plan, approved specifications sheets, guide sheets, or other acceptable documentation.